Coconino County Community Health Assessment

June 2013

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Reviewed	and a	dopted	August	2015
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Marie Peoples Chief Health Officer 8-25-2015

Printed Name Signature Title Date

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EXECUTIVE SUMMARY

The Coconino County Public Health Services District (CCPHSD) conducted a Community Health Assessment in the summer of 2012 as part of an ongoing strategic planning process. This report showcases a community-based approach and acts as a milepost on the road to possible public health accreditation. Quantitative data at the County and community level were analyzed, where available. Qualitative data were collected via online surveys, mail surveys, and eight focus groups in various communities in the County.

The findings in this report suggest three main health themes that deserve further attention:

- Access to health care, including the long distances that some clients must travel to receive services, the cost of services, and the lack of adequate health insurance.
- Preventable chronic diseases and illnesses such as cardiovascular disease and diabetes that can be reduced by addressing obesity.
- Unintentional injuries and deaths due to unintentional injuries, including abuse, motor vehicle crashes, and other causes.

Two other issues, indirectly related to health and perhaps beyond the purview of the CCPHSD, also arose in the assessment: poverty and alcohol use/abuse. Poverty rated highly as a barrier to health care and at least partially, as a cause of illness. It is the Health District's hope that these findings galvanize community action to mitigate the economic conditions impacting our residents' health. Alcohol-induced deaths and the possibility that alcohol use may be related to various health concerns such as injuries, assault, and certain diseases was also a theme.

INTRODUCTION

Why a community health assessment?

The Coconino County Public Health Services District (CCPHSD) is pleased to release this community health assessment, which provides the most current data on the County's health assets, demographics, leading causes of death and illness, and residents' perspectives on their health. This assessment is intended to provide a platform for community-wide health improvement collaborations, and to serve as a resource for policies, budgets and programs.

Community health assessments also provide critical information to the Coconino County Public Health Services District, which is responsible for creating healthy conditions where people live, work, study, play and worship. Therefore, in addition to collecting statistics on health resources and conditions, this assessment also considers environmental, economic and educational factors that influence the population's health.

Why now?

CCPHSD's last community health planning process culminated with the release of the *Healthy Coconino* 2012 plan in 2007. In accordance with an established best practice of conducting this process every five years, this next community health assessment is being completed five years later.

CCPHSD has also decided to ensure that all the District's work is aligned with the standards required by the newly-launched Public Health Accreditation Board, recognized as a collection of best practices in public health. CCPHSD was selected as one of only 19 local, tribal and state health departments across the country to serve as a beta test site for this national, voluntary program. Since the beta test was completed two years ago, the District has been examing accreditation prerequisities and will work with the District Advisory Board and Board of Directors to assess the feasibility of formally pursuing accreditation.

How was this developed?

Many sources were used to provide information on health and health-related conditions and factors in Coconino County. Both state and national databases, in addition to county agencies, proved to be very valuable resources for county level data. Community-specific data were included, as available. Also, as available, comparisons are made both to the state of Arizona and to the United States, in addition to goals from the nation's *Healthy People 2020* and the benchmarks cited in the *County Health Rankings* report. Finally, community input was obtained through a web-based survey, a mailed survey, and focus groups.

What's next?

CCPHSD is sharing this report with community members and community leaders throughout our county. We will be seeking feedback about the priorities that have been identified, and will work in partnership with the community to develop action plans that will address the greatest health needs and move us forward in our journey to optimal health.

ABOUT COCONINO COUNTY

Situated in Northern Arizona, Coconino County is home to spectacular landscapes, and visitors from around the world are drawn to the region's natural beauty and cultural diversity. Attractions include Grand Canyon National Park, Oak Creek Canyon, Sunset Crater National Monument, Lake Powell, and several Indian Nations. The region is rich with a diversity of landscape and culture, making it a unique and exciting place to live.

With 18,608 square miles and 11,886,720 acres of land, Coconino County is the largest county in Arizona and the second largest county in the United States. Roughly half of the land is public property, and 38% belongs to Indian reservations that are home to Navajo, Hopi, Paiute, Hualapai, and Havasupai tribes. Of the 12% of land that is privately owned, three-fourths of it is in large ranches held by about ten owners.

Population centers include Flagstaff, Fredonia, Page, Tuba City, Tusayan, and Williams, with populations ranging from 558 in Tusayan to 65,870 in Flagstaff. The remaining area is arid land dotted with isolated communities. Major employers are 1) government, 2) the leisure and hospitality industry, and 3) trade, transportation and utilities.

The County's sheer magnitude, coupled with its geographic and economic diversity, makes it important to consider community-specific issues when planning and implementing health improvement plans. The urban-rural nature of the County has its challenges: aggregated county-wide data may skew results toward larger population centers and mask conditions for rural areas. That said, oftentimes only countywide data are available. Accordingly, this community health assessment describes the County as a whole for the majority of indicators, with community-specific data included to the extent possible.



WHO WE ARE

DEMOGRAPHICS

As of 2010, the total population in Coconino County was 134,421, marking a 15.6% increase since 2000. The population is evenly split between males and females, and is relatively young, with only eight percent of the population being 65 years or older (Figure 1). The overrepresentation of young adults is due to the 18,292 Northern Arizona University students who live in the vicinity of Flagstaff during most or all of the year. Nearly one in every eight Coconino County residents is an NAU student.

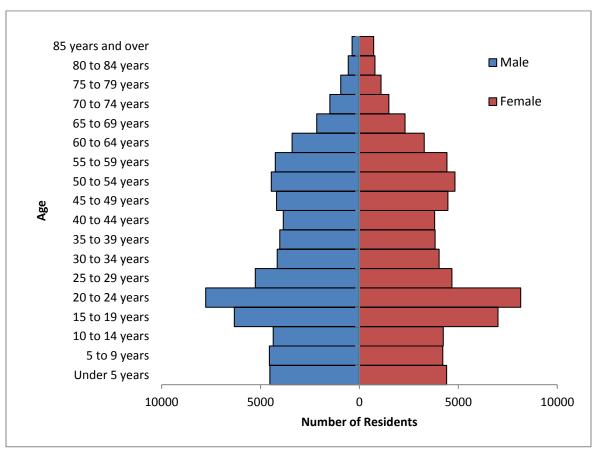


Figure 1: Population Pyramid (Age and Sex Distribution) for Coconino County – 2010

While the majority of residents are White, 27% of residents belong to Navajo, Hopi, Paiute, Hualapai, Havasupai, or other Native American tribes (Figure 2a). Fourteen percent of the total Coconino County population identifies themselves as Hispanic or Latino (Figure 2b). Given the racial and ethnic mix of the County, it's not surprising that there is some language diversity; while English is the predominant language spoken at home, the collective group of Native Languages and Spanish are the second and third most common (Figure 3). Importantly, almost 1 in 10 Coconino County residents (9.5%) speak English less than "very well."

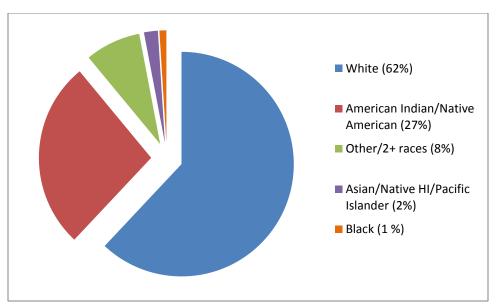


Figure 2a: Population in Coconino County by Race – 2010

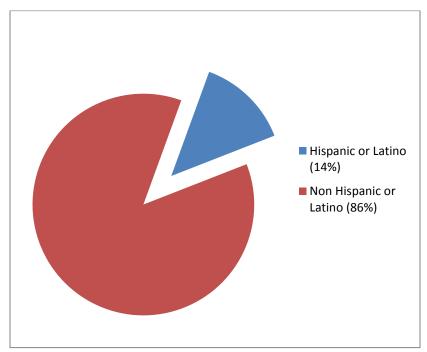


Figure 2b: Population in Coconino County by Ethnicity - 2010

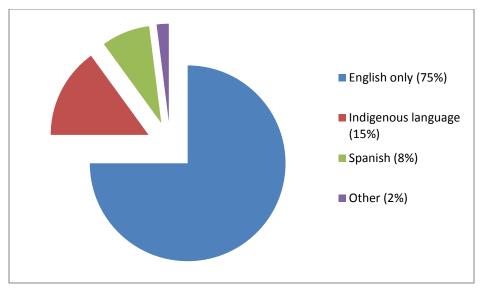


Figure 3: Language Spoken at Home in Coconino County - 2010

EDUCATION

- Coconino County has eight public school districts in addition to three public institutes of higher learning: Northern Arizona University, with a main campus in Flagstaff and various satellite campuses and other facilities throughout the County; Coconino Community College, also with several campuses; and Diné Community College, located in Tuba City.
- Educational attainment in the County is higher than Arizona's with respect to adults that have graduated from high school and the highest in the state with respect to adults with advanced degrees (Figure 4).
- The school drop-out rate for students in grades 7-12 has stayed between three and four percent for the past five years and close to Arizona's rate (Figure 5).

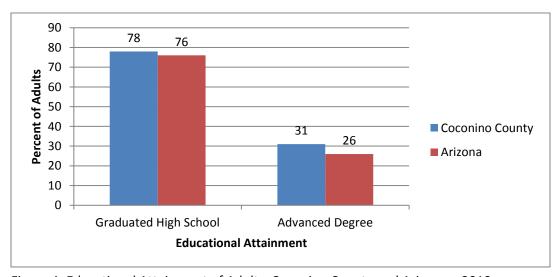


Figure 4: Educational Attainment of Adults, Coconino County and Arizona – 2010

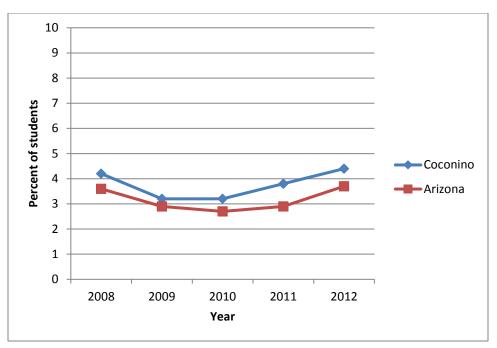


Figure 5: School Drop-out Rates (Students in Grades 7 to 12), Coconino County and Arizona, 2008-2012

INCOME AND EMPLOYMENT

- Generally speaking, Coconino County residents are slightly better off than other residents of the state and nation with respect to income and levels of employment. In 2009, the median household income in Coconino County was slightly higher than the state average, and per capita income was slightly better than the average per capita income for U.S. counties (Figure 6).
- As was the case for the U.S. and Arizona, Coconino County has experienced a sharp increase in the unemployment rate over the past five years. In 2011, the County's unemployment rate was slightly lower than Arizona's rate and slightly above the U.S. rate (Figure 7).

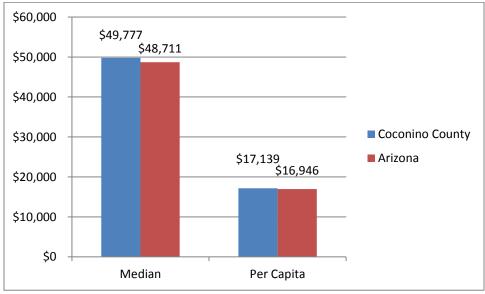


Figure 6: Median and Per Capita Income - 2009

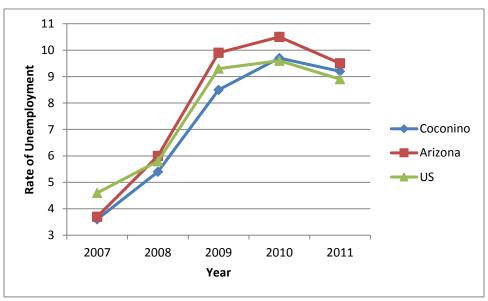


Figure 7: Average Annual Unemployment Rates, Coconino County, Arizona, U.S. – 2007-2011

HEALTH RESOURCES

- A number of health care services are available in Flagstaff, including the Flagstaff Medical Center, with a variety of private clinics, several federally-qualified health centers and other hospitals located throughout the County.
- Overall, Coconino's ratio of population to primary care physicians is better than the ratios for Arizona and the median for U.S. counties, but it is not in the 90th percentile of U.S. counties (Table 1). It is possible that the ratio is actually less favorable than it appears, as residents of other counties seek care in Coconino County, particularly at Flagstaff Medical Center, the regional hospital. If these visitors from other counties were included in the population part of the ratio, the ratio would show more patients for each primary care physician.

Table 1: Ratio of Primary Care Physician County, 2011-12	to Residents in Coconino
Location	Ratio of Population to
	Primary Care Physicians
Coconino County	1,360:1
Arizona	1,588:1
Median for U.S. counties	1,963:1
90th percentile among U.S. counties	1,067:1

- Unfortunately, some areas of the County are underserved, as illustrated by several designations:
 - Federal designation of "Primary Care Health Professional Shortage Area" applies to the eastern half of the County (Flagstaff and the Navajo reservation are excluded)
 - Arizona designation of "Medically Underserved Area" applies to all but the southeast quadrant of the County, with the northern half of the County being the most underserved
 - A "Dental Health Professional Shortage Area" applies to the eastern part of the County, excluding Page, with three dental clinics
 - o The entire county is a "Mental Health Professional Shortage Area"
- Adding to the difficulties of the medically underserved in Coconino County is the lack of health insurance for some residents. In Coconino County, the percent of uninsured adults and children dropped between 2008 and 2009 (Figures 8 and 9). One explanation for the decrease may be that laws unfavorable to undocumented residents caused many lower income (and uninsured) residents to leave the state during this period.
- Between 2009 and 2011, the percent of uninsured adults was relatively stable and was higher than the percent for Arizona as a whole (Figure 8). During the same period, the percent of uninsured children increased somewhat after a low of only 6% uninsured in 2009 to a high of 14.9% in 2011 (Figure 9). The percent of uninsured individuals is anticipated to decrease when the Affordable Care Act is fully enacted.

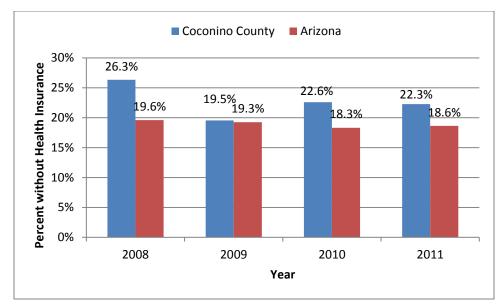


Figure 8: Percent of Adults without Health Insurance

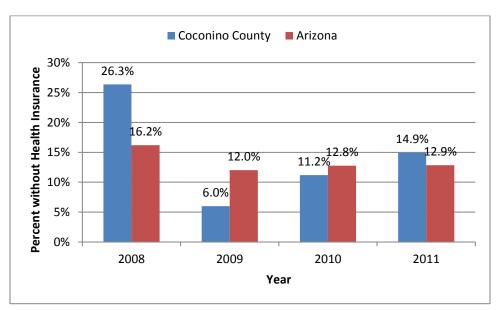


Figure 9: Percent of Children without Health Insurance

MORTALITY RATES AND LEADING CAUSES OF DEATH

- With 678 deaths in 2010, the crude death rate was 504.4 deaths per 100,000 Coconino County residents which compares favorably to the 717.6 deaths per 100,000 Arizona residents (Figure 10). This means that there were fewer deaths per 100,000 residents in Coconino than in Arizona. This is not surprising given that the population of Coconino County has a larger proportion of young people than does Arizona. When the death rate is adjusted for age differences, the mortality rates in Coconino County and Arizona are comparable. The ten-year trend is also comparable for the County and State (Figures 10 and 11).
- Not surprisingly given the youthful Coconino County population, the average age at death is younger for Coconino County than for Arizona. As is the case for Arizona as a whole, women have a later average age at death than do males (Figure 12).
- The death rates for infants and young children (aged one to four years-old) in Coconino County was somewhat higher than the rates for Arizona children in the same age groups. However, because the number of deaths is so small, this may fluctuate widely from year to year. In the other age categories, the rate is similar to the Arizona rates, (Table 2).
- When looking at causes of death, cardiovascular disease and cancer are the two leading causes
 of death in Coconino County, although at much lower rates than in Arizona as a whole.
 Unintentional injuries are the third most common cause and are much higher for Coconino
 County than for Arizona. The diabetes death rate is also higher for Coconino County, which is
 not surprising given the large proportion of Native Americans living in Coconino County and the
 prevalence of diabetes in this group (Figure 13).
- Deaths can be classified by whether or not they involve firearms, drugs or alcohol in some way, regardless of the stated cause of death. For example, if an individual uses a gun to commit suicide, this death will be classified as "suicide" but will also be counted in the "injury by firearms" tally. In Coconino County, patterns for these categories of death were as follows (Figures 15-17):
 - The Coconino County rate of deaths that involved firearms (e.g. accidental discharge, suicide, homicide) was at almost the same rate as for Arizona, including the total, males, and females (Figure 15).
 - For drug-induced deaths (e.g. accidental poisoning by drugs, suicide by drugs, mental disorder due to psychoactive drugs), Coconino's rate was below Arizona's among the total, males, and especially for females (Figure 16).
 - Alcohol-induced deaths (e.g. degeneration of nervous system due to alcohol use, alcoholic gastritis, alcoholic liver disease, intentional poisoning by alcohol) showed the opposite pattern. Coconino County rates of alcohol-induced deaths were higher than Arizona's rates, for the total, females, and significantly so for males (at over twice the rate) (Figure 17).
- In Arizona, American Indian/Alaska Natives have disproportionately high mortality rates due to unintentional injury, diabetes and liver disease and disproportionally lower mortality rates due to cancer and lung disease (Figure 18).

About one in three deaths (35%) that occurred in Coconino County in 2010 were non-residents
of Coconino County. This is a higher percentage than any other county in Arizona. About onethird of these non-resident deaths were residents of other states or countries. The rest were
residents of other counties in Arizona, largely Navajo, Yavapai, and Apache.

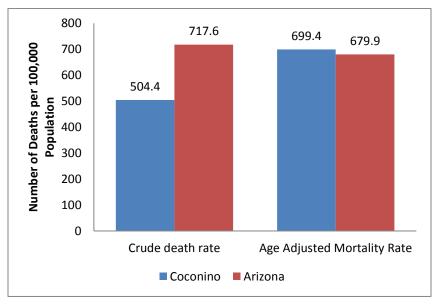


Figure 10: Crude death rate and age-adjusted mortality rate per 100,000 population, Coconino County and Arizona, 2010. (The age-adjusted mortality rate is adjusted to the 2000 U.S. standard population.)

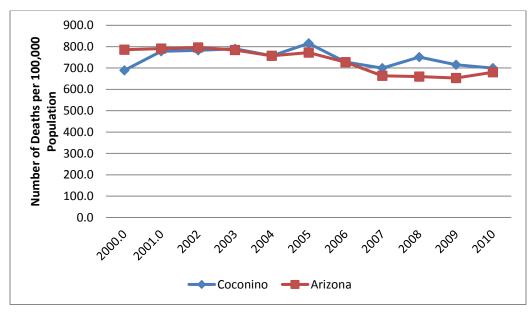


Figure 11: Age-adjusted Mortality Rates, Coconino County and Arizona, 2000-2010. Age is adjusted to the standard U.S. 2000 population.

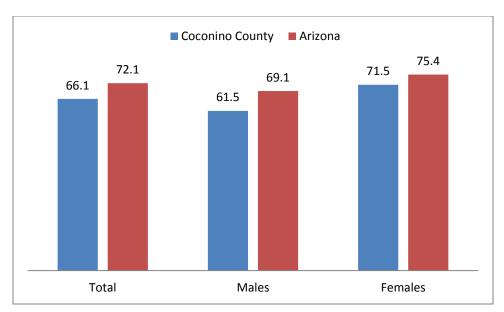


Figure 12: Average Age at Death by Gender for Coconino County and Arizona - 2010.

Table 2. Number of deaths for Coconino County and Number and Rate of deaths for Coconino County and Arizona by Age Groups, 2010.			
Age group	Number of deaths in each age group	Rate per 100,000	residents in each age group
	Coconino County	Coconino County	Arizona
All ages	678	678	45,863
<1	15	845.1	596.2
1-4	6	83.7	31.7
5-14	2	11.5	13.6
15-24	19	65.0	71.0
25-34	24	132.4	115.2
35-44	39	251.6	168.6
45-54	86	479.0	401.9
55-64	87	566.4	802.2
65-74	104	1396.5	1583.7
75-84	137	4047.3	4155.6
85+	159	14560.4	12894.6

Note that small number of deaths in younger age groups may vary widely by year.

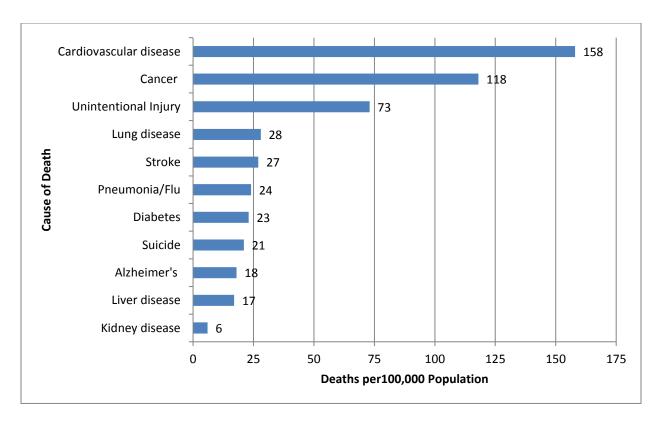


Figure 13: Age-Adjusted Mortality Rates for the Top Ten Leading Causes of Death, Coconino County – 2010.

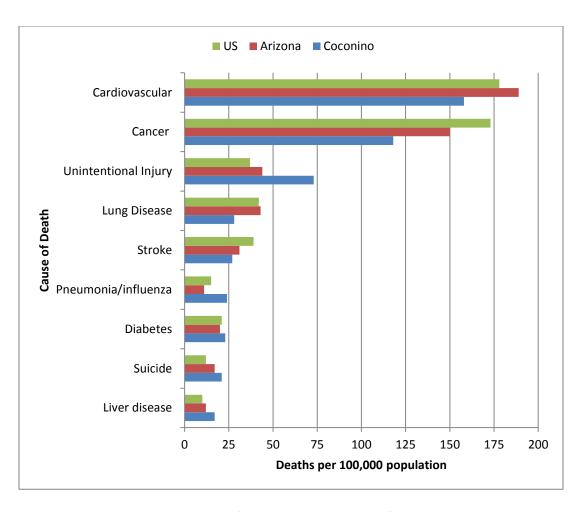


Figure 14: Age-Adjusted Mortality Rates for the <u>Selected</u> Causes of Death, Coconino County, Arizona, and U.S. – 2010. (See previous chart for all leading causes of death.)

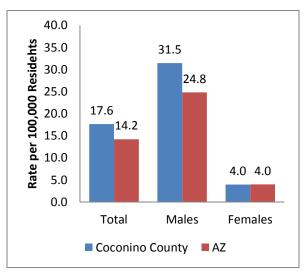


Figure 15: Age-Adjusted Mortality Rates for Injury by Firearms Deaths, Coconino County and Arizona - 2010

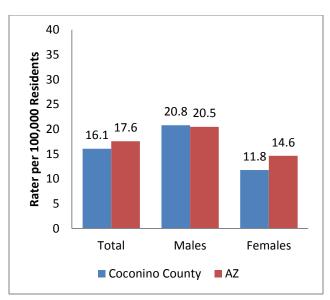


Figure 16: Age-Adjusted Mortality Rates for Drug-Induced Deaths, Coconino County and Arizona - 2010

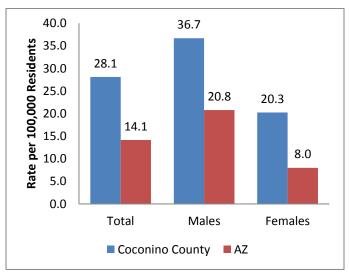


Figure 17: Age adjusted mortality rates for Alcohol-Induced Deaths, Coconino County and Arizona – 2009.

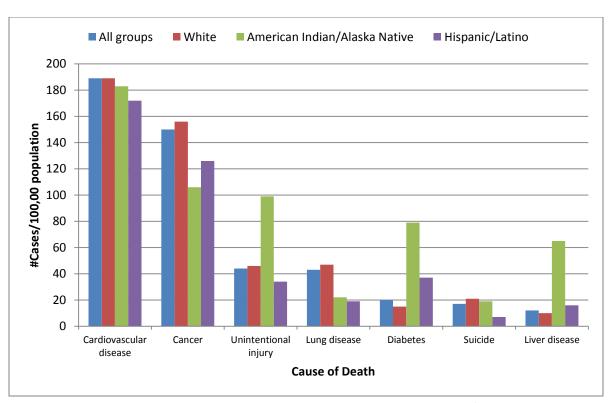


Figure 18: Age-Adjusted Mortality Rates for Selected Causes of Death by Race/Ethnicity in Arizona - 2010

OBESITY

One risk factor that contributes to many chronic diseases, including diabetes and heart disease, is obesity. At first glance, the percentage of obese adults in Coconino County (21%) appears to be favorable as it is lower than the percentages for Arizona and the U.S (25% and 28%). However, given the large proportion of young adults – who are less likely to be obese than older adults (obesity tends to be more common as people age, at least up to age 75) – the obesity rate should be relatively low compared to other counties and the state as a whole. In addition, the absolute statistic of one in every five Coconino County adults being obese is noteworthy (Figure 19).

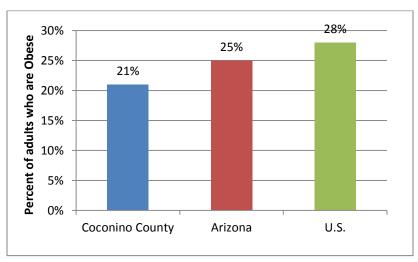


Figure 19: Percent of Adults who are Obese (Body Mass Index of 30.0 or greater), Coconino County, Arizona, U.S. - 2011

PREGNANCIES AND BIRTH

- As is the case for Arizona, Coconino County's population increase due to births has been declining since 2007 (Figure 20).
- Pregnancies among teens have decreased in Coconino County and Arizona (Figure 21) and are
 well below the rate for Arizona and the Healthy People 2010 goal for 18-19 year olds (Figure 22).
 For 10-17 year olds, Coconino County's rate is similar to Arizona's rate (Figure 22).
- For the first time in five years, the infant mortality rate exceeded that of the state and national rates in 2010 (Figure 23). However, the Coconino County rate rates tend to fluctuate widely due to the small number of cases (5-18 infant deaths per year), so this should be monitored carefully in future years.
- The rate of infants born with low birthweight in Coconino County is similar to the rate for the U.S. but above the rate for Arizona (Figure 24). Despite the fluctuations, the rate was relatively stable between 2000 and 2010.
- Use of prenatal care in the first trimester in Coconino County was at about the same level as Arizona, and was better than the Healthy People 2020 goal. Still, nearly one in seven pregnant women (15%) received inadequate prenatal care (Figure 25).

 Although the percent of low birthweight births is better than the Healthy People 2020 goal of 7.8%, the rates are higher among Hispanic/Latino, and non-Hispanic White populations (Figure 26).

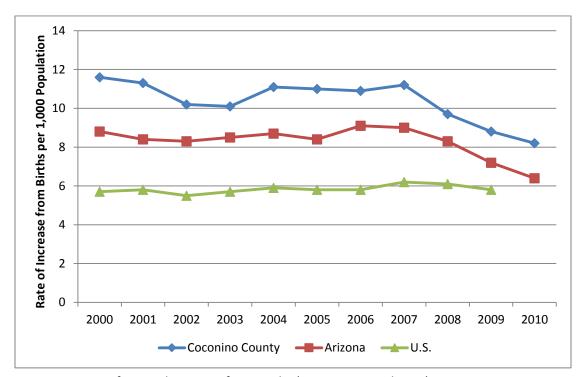


Figure 20: Rate of Natural Increase from Births (per 1,000 Population), Coconino County, Arizona, and U.S., 2000-2010. Data not available for U.S. for 2010.

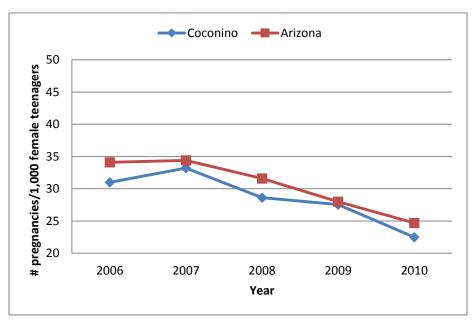


Figure 21: Pregnancy Rates Among Teens (Females < 19 Years Old), Coconino County and Arizona, 2006-2010.

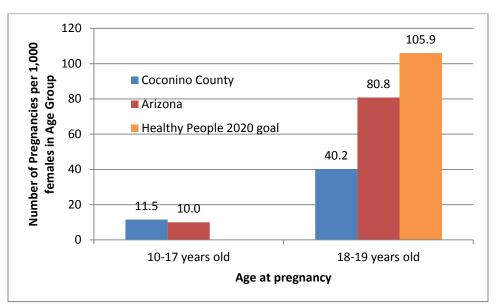


Figure 22: Teen Pregnancy Rates (per 1,000 females in specified age group) in Coconino County and Arizona and Healthy People 2020 goal - 2010. (In 2010, there were 65 births to women under 18, 140 births to women 18-19.)

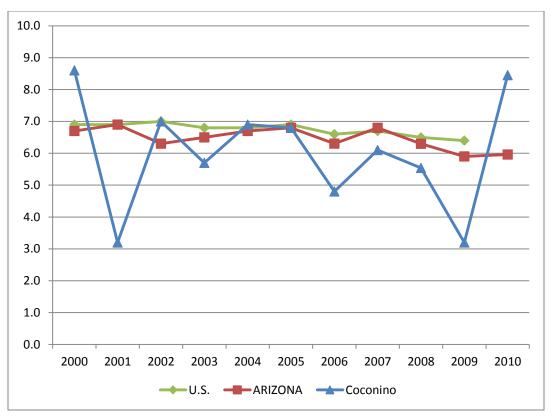


Figure 23: Infant Mortality Rates (per 1,000 live births) for Coconino County, Arizona, and U.S. 2000 to 2010. (Data for U.S. for 2010 not available.)

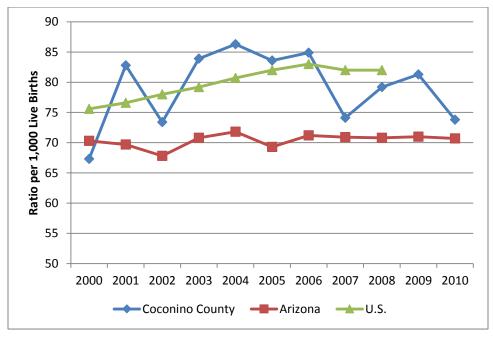


Figure 24: Low Birthweight Ratios (per 1,000 live births) in Coconino County, Arizona, and the U.S. – 2000 to 2010. (Data for U.S. for 2009-10 not available.)

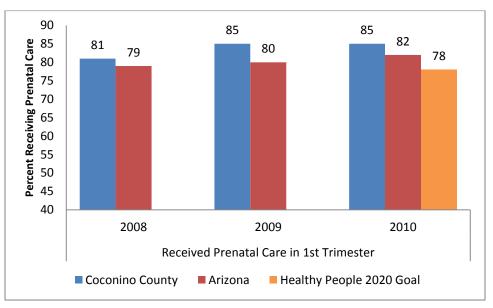


Figure 25: Percent of Mothers of Newborns who Received Adequate Prenatal Care, Coconino County, Arizona, and Healthy People 2020 Goal - 2008-2009

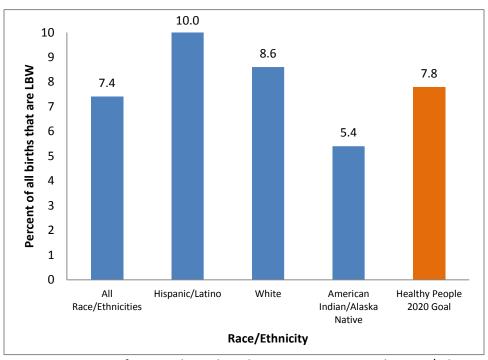


Figure 26: Percent of Low Birthweight Babies, Coconino County by Race/Ethnicity – 2010

COMMUNICABLE DISEASES

- Rates of syphilis and varicella steadily decreased between 2007 and 2010 (Figure 27).
- The rate of pertussis fell through 2010 (Figure 28) but has increased dramatically since then, apparently part of an outbreak in Western States.
- In contrast to the progressive decrease at the national level since 2003, the County's incidence rate of tuberculosis has not followed the same trend (Figure 29).
- In addition, both chlamydia and gonorrhea have increased over the last several years (Figures 30a and 30b).

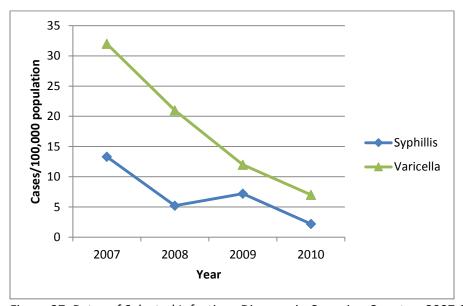


Figure 27: Rates of Selected Infectious Diseases in Coconino County – 2007-2010

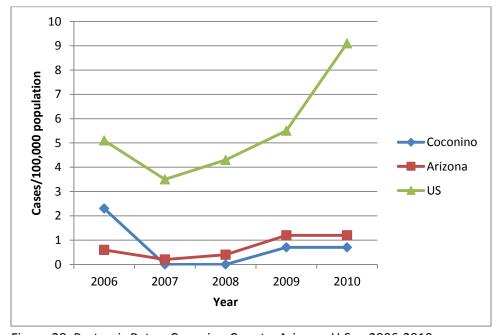


Figure 28: Pertussis Rates, Coconino County, Arizona, U.S. – 2006-2010

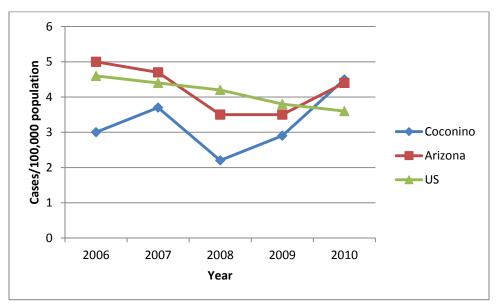


Figure 29: Tuberculosis Rates

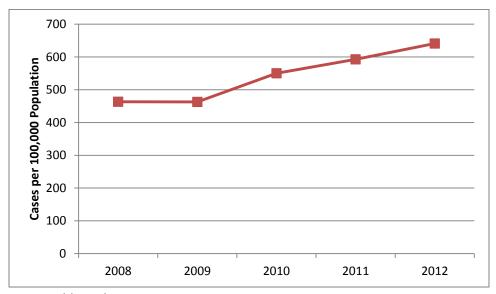


Figure 30a: Chlamydia Rates, Coconino County – 2008-2012

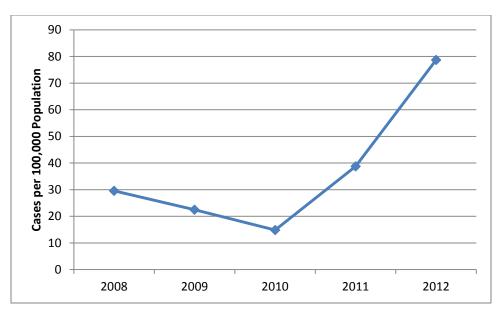


Figure 30b: Gonorrhea Rates, Coconino County – 2008-2012

ORAL HEALTH

• Untreated tooth decay among children in Arizona exceeds the national average (Figure 31) and falls short of the Healthy People 2020 goals (21% for 2-4 year olds and 26% for 6-9 year olds).

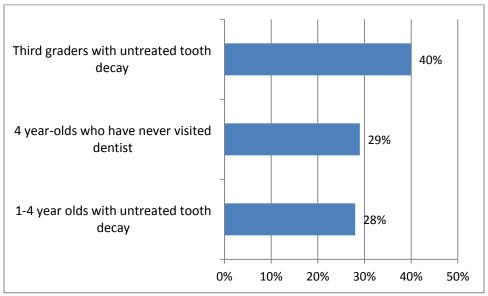


Figure 31: Oral Health Issues in Children, Arizona - 2008-2009 (1-4 year olds), 2009-10 (Third Graders)

TOBACCO, ALCOHOL AND DRUG USE

- Despite the proven health risks, one in five Coconino County adults (21.8%) is a tobacco smoker.
 This is not far from the percentages for Arizona and the U.S. but is noteworthy in the absolute (Figure 32).
- Almost one in seven Coconino County adults (15%) engaged in excessive drinking during 2011 which is lower than the average for Arizona counties (17%). Excessive drinking is defined as consuming more than 4 (women) or 5 (men) alcoholic beverages on a single occasion in the past 30 days, or drinking more than one (women) or 2 (men) drinks per day on average.
- Coconino County 12th graders are more likely than Arizona 12th graders as a whole to have used alcohol, cigarettes, marijuana, and/or prescription drugs in the past 30 days (Figure 33). In addition, this represents an increase in the percent of 12th graders with past 30 day use of various substances from 2008 to 2012 (Figure 35).
- Figure 34 shows that the County's 12th graders have a much higher likelihood to have used substances in the past 30 days when compared to 10th and 8th graders in Coconino County. This is not surprising given that most adolescents begin use at some point during their teen years.
- Over the same time period when successive 12th grade cohorts were increasingly more likely to have used substances, there was a *decrease* in past 30 day use among 8th grade cohorts (Figure 36). It will be interesting to see if the 2012 cohort of 8th graders will continue to have lower percentages of use than the cohorts that came before, or if they will just delay first use and eventually reach the same level as today's 12th graders.

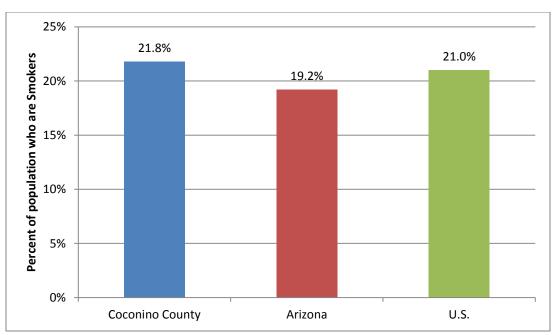


Figure 32: Percent of Residents Who Currently Smoke tobacco, Coconino County, Arizona and U.S. - 2011

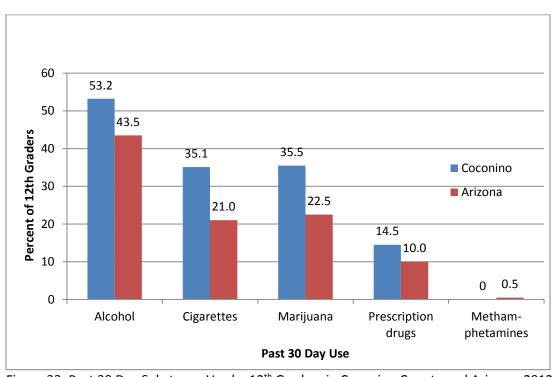


Figure 33: Past 30 Day Substance Use by 12th Graders in Coconino County and Arizona, 2012.

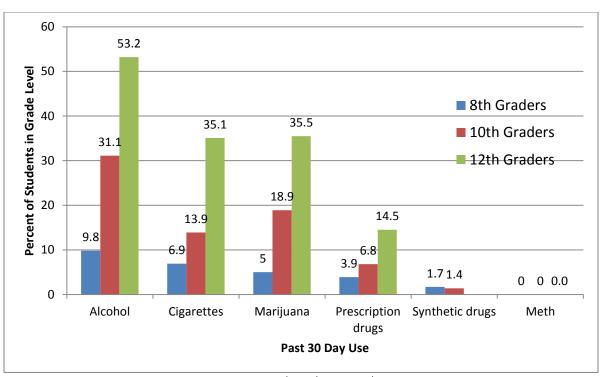


Figure 34: Past 30 Day Substance Use Among 8th, 10th, and 12th Graders in Coconino County, 2012. Note: Information on synthetic drugs was not collected for 12th graders.

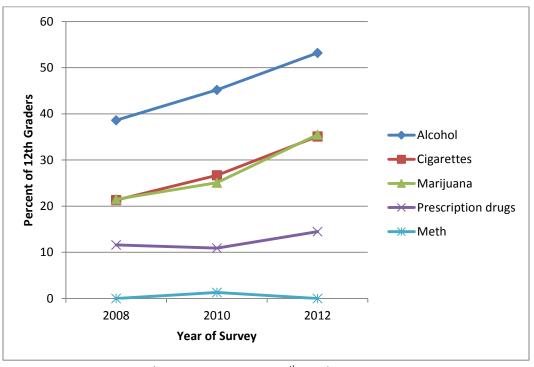


Figure 35: Past 30 Day Substance Use Among 12th Graders in Coconino County - 2008, 2010, and 2012.

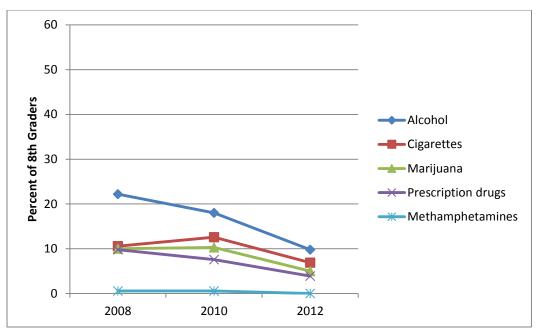


Figure 36: Past 30 Day Substance Use Among 8th Graders in Coconino County - 2008, 2010, and 2012.

ENVIRONMENTAL FACTORS

Air Pollution

Not surprisingly, Coconino County receives very favorable ratings with respect to clean air (Table 4).

Table 4: Air Quality Indicators - 2013			
Indicator	Coconino County	Average of Arizona Counties	90th percentile among U.S. counties
Particle pollution weighted average	0	1	0
Annual number of unhealthy air quality days due to ozone	1	29	0

Facilities that Support Physical Activity and Nutrition

Despite the abundance of outdoor recreational opportunities in natural settings, the County is less equipped with facilities that support physical fitness. Moreover, limited access to healthy foods, coupled with easy access to fast food, make it more difficult to adhere to well-rounded and optimally healthy diets. Coconino County stands to improve on both of these indicators (Table 5).

Table 5: Select Physical Environment Indicators	s - 2013		
Indicator	Coconino	Average	90th
	County	of Arizona	percentile
		Counties	among U.S.
			counties
Number of recreational facilities per 100,000	6	7	16
population in a given county.			
Percent of population who are low-income	13%	7%	1%
and do not live close to a grocery store			
Proportion of restaurants in a county that are	43%	52%	27%
fast food establishments.			

CRIME

- Criminologists use the numbers and rates of "index crimes" to determine the relative safety of a
 community. Index crimes include murder, rape, robbery, aggravated assault, burglary, larcenytheft, motor vehicle theft and arson. Figure 37 shows the rates of each of the index crimes in
 Coconino County and Arizona.
 - Coconino County has a higher rate of larceny (such as shoplifting, bicycle theft), rape, aggravated assault, and arson than does Arizona.
 - Coconino County has a lower rate of burglary (forcible or unlawful entry of a structure),
 car theft, and robbery (taking property by force) than does Arizona.
- Despite the fact that Coconino County has higher rates of rape and aggravated assault, the overall violent crime rate in Coconino County is lower than that of Arizona (Figure 38).
- Figure 39 shows the number and proportion of violent crimes in Coconino County in 2011, with over 400 aggravated assaults being the most common, followed by 68 rapes.

• It is important to note that tribal agencies do not report to the statewide data repository for crime, which served as the resource for crime. Thus, the overall rate and rates for some specific crimes may actually be higher.

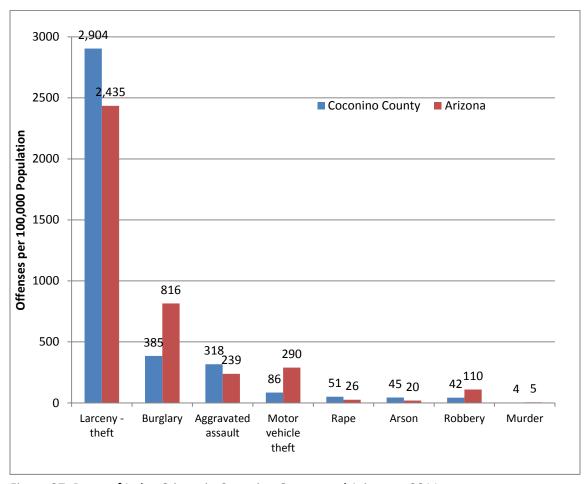


Figure 37: Rates of Index Crimes in Coconino County and Arizona – 2011

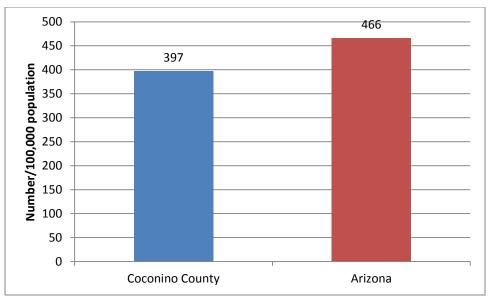


Figure 38: Rate of Violent Crimes, Coconino County and Average of Arizona Counties - 2011

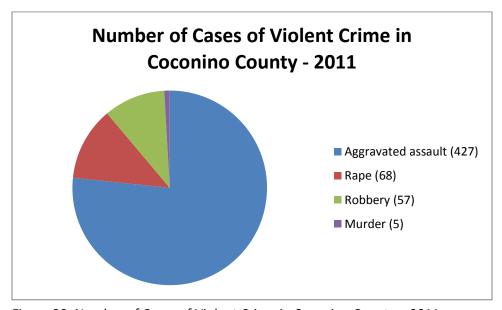


Figure 39: Number of Cases of Violent Crime in Coconino County – 2011

COMMUNITY CONCERNS

Community input was sought through three mechanisms: an online survey, available through the CCPHSD website; randomly mailed surveys; and, eight focus groups conducted throughout Coconino County in the following locations: Tuba City, Kaibeto (2 groups), Page, Fredonia, Happy Jack, Williams, and Grand Canyon Village. All respondents were asked about the health problems and assets of their community.

Respondents listed a number of different assets that included local health care facilities, activity groups like churches and afterschool programs, and local recreation centers. Combining both survey and focus group mentions, the most pressing problems identified throughout the County were as follows:

- Poor access to services. Specific concerns under this category included a lack of providers
 overall, including a lack of specialists; long distances to providers (with many also citing
 transportation difficulties); long waits for available appointments; a lack of affordable health
 care; and a lack of indoor exercise facilities.
- Obesity and chronic diseases. Adult and childhood obesity alike are captured in this category, in addition to diabetes and cardiovascular problems such as heart disease and high blood pressure.
- **Issues related to poverty**. Poverty, unemployment, and lack of health insurance were the most frequently cited issues in this category.
- **Poor nutrition/limited access to healthy food**. A number of respondents had concerns related to nutrition that were attributed to the high-fat nature of some traditional diets, limited food selection, and long distances to stores with healthy food options.
- **Substance abuse (including alcoholism).** Both substance abuse in general and alcohol abuse, in particular, were noted as concerns throughout the County.
- Crime and safety. Concern about crime and personal safety were expressed by a small group of respondents.

Individual communities shared some county-wide concerns, and also had some other specific health-related issues that emerged from the data collection efforts, as described below:

Page



Page is a community of 7,247 people (2010) in northern Arizona located near Lake Powell. The Navajo Generating Station (coal power plant), the Glen Canyon Dam, and tourism are three main economic draws to the area. Being situated close to the Navajo Reservation and southern Utah, Page is utilized by surrounding communities for food shopping and services. Additionally, many retirees have relocated to Page for its natural beauty and dry, warm climate. The focus group in Page felt that their community's health was challenged by high teen pregnancy rates, substance abuse, obesity and diabetes, and the overarching struggling economy. They wanted to see many of the social support programs that had lost funding reopened and more church and senior involvement in helping youth make correct life choices.

Fredonia



Located on the Arizona-Utah border, Fredonia is one of a few cities in the Arizona Strip, an area historically populated by Mormon (Church of Latter Day Saints) settlers. Many of Fredonia's 1,314 citizens (2010) visit Kanab, Utah for goods and services.

Tourism, services, and the Forest Service are major local employers. During the focus group, residents cited lack of access to health care as a concern. Fredonians felt most community members were living below the poverty line, the unemployment rates were very high, and that health insurance and health care was either too expensive or not available. They also cited the economic downturn as making it harder for families to eat healthy. The focus group composed a wish list, independent of the facilitators' questions, which included teaching self-reliance (a value specifically encouraged by the Church of Latter Day Saints), senior citizen involvement in schools, a free or sliding scale clinic, and health education through the Church of Latter Day Saints.

Williams



Located on Interstate 40, Williams is one of the main routes to the Grand Canyon. Tourism involved with the Grand Canyon Railway is a major source of income for the community, who tend to use Flagstaff as a supply of goods and services. There are many retirees in Williams, as the climate is dry and pleasant in the summer. Total population in 2010 was 3,023 people with a median age of 39 years. Focus group respondents cited diabetes and obesity, substance abuse, cancer rates, and poor nutrition as health challenges. The abundance of community groups was listed

as a community asset and participants also saw job creation as a path to healthier communities.

Tuba City



A city of 8,611 residents (2010) on the Navajo Nation, Tuba City is en route to several tourist destinations and serves as a commercial hub for smaller, nearby Navajo Nation communities. The focus group respondents felt that chronic diseases were the biggest challenges, namely cancer, obesity, diabetes and heart problems. Secondary to poor nutrition, a lack of physical activity was sited. Safety was a primary barrier to health, as dog packs, coyotes, gang activity, crime and alcohol abuse rates made

outdoor activity risky. The traditional diet was named as both an asset (as a cultural tradition) and a drawback; it is high in fat, which in the past would have been necessary for survival when the Navajo people were herders. Current sedentary lifestyles have changed dietary needs. There are free clinics in Tuba City as well as exercise classes and a community garden. The focus group wanted to see a park put in at the old Dotson Reservoir, animal control from the local government, healthy food sold at local stores, and the Community Center refunded and reopened.

Blue Ridge/ Happy Jack



A rural population center on the southern border of Coconino County, this area is well known for its dispersed retirement communities and outdoor living. Tourism is the main form of

income for working residents. As the population is predominantly older, health concerns of the focus group centered on access to emergency health services and diseases such as dementia, Alzheimer's, social isolation and lack of independence. Residents wanted to see larger community health staff, a new clinic, and shorter wait times for ambulance services. Participants also wanted to encourage local families to use a nearby lake and reservoir, which is currently being used predominantly by tourists.

Tusayan/Grand Canyon Village



The 2,004 residents of Grand Canyon Village (2010) live and work at the South Rim of the Grand Canyon and are almost entirely employees of the National Park Service or Xanterra, a hotel and hospitalities corporation. Tusayan, population 558, is located a few miles south of Grand Canyon Village and is also highly dependent on tourism. Restaurants, gas stations, and hotels are major employers. There is one grocery store in Grand Canyon Village/Tusayan and the focus group complained the prices were too high to be affordable. Most residents use Flagstaff as their

goods and services outpost. Participants cited distance to healthy food as a main health concern. They also noted that there were two different populations in the community – those who lived there year round and seasonal workers. Seasonal workers were perceived as being young and fit while many permanent residents were seen as sedentary and as practicing poor nutrition. The transiency and remote location were noted as major challenges to community health.

Kaibeto



Kaibeto is a Navajo Nation community of 1,522 people (2010) located approximately 32 miles east of Page in the Northeastern corner of Coconino County. Its major employers are governmental agencies such as the Kaibeto Boarding School (K-8th grade) and the six tribal programs: the Navajo Nation Chapter, Head Start, Aging Program, the Behavioral Health, Social Services and the Community Health Representatives. There is only one place to buy food in Kaibeto so residents are limited to

few choices. Obesity and related concerns (high blood pressure, diabetes, sedentary lifestyles and lack of access to healthy foods) were themes that emerged during the focus group. Additionally, there was a concern regarding the lack of Navajo cultural influence on the younger generation, and a strong belief that strengthening this influence would have a positive impact on healthy behaviors. Concerns regarding appropriate parenting and parenting skills also were expressed. Poverty, an aging population, and lack of easier access to health care all were noted as challenges to a healthier community.

PUTTING IT ALL TOGETHER



Coconino County has a number of factors that promote health and wellbeing: a highly educated population; average income and employment that are equivalent to or slightly exceed national statistics; some maternal and infant health indicators that exceed national targets; decreasing trends of several communicable diseases; plentiful outdoor recreational activities; and, overall good air quality.

Both epidemiological data and community perceptions illustrate a group of related concerns regarding public health:

- Poor access to health services, health insurance, money for health care. Although a number of health-related services are available in Flagstaff, the same is not true in outlying areas. Increased access in the more rural parts of the County could improve health outcomes, both for preventive care and acute care. Unintentional injury. Unintentional injuries are disproportionately represented as causes of death in Coconino County when compared to the state as a whole and to the nation. CCPHSD will examine data on unintentional injuries more closely to identify risk factors and causes.
- Chronic disease and the risk factor of obesity. Obesity is a risk factor for many of the County's top ten leading causes of death such as cardiovascular disease, stroke, and diabetes and one in five residents are obese. "Food deserts", as defined by population centers far from a grocery store or other place where they people can purchase fresh and healthy foods, are present in many areas of the County.
- Alcohol and other substance use. Alcohol-induced deaths among men in Coconino County is high as is substance use among 12th graders. As substances can contribute to health risks such as liver disease and motor vehicle accidents, it is a health concern in the County.
- **Health issues for Native Americans.** Native Americans are more likely than other race/ethnic groups to die from an unintentional injury, diabetes or liver disease and many live in areas where access to care is poor.
- **Sexually transmitted diseases.** With chlamydia and gonorrhea on the rise, CCPHSD will need to identify cases, treat them, and encourage sexually active individuals to stop the spread of disease.
- **Crime and safety.** The high rate of aggravated assaults and rape in the County, although not related to disease per se, contributes to residents' well-being.
- Geographic distribution. For all of the health issues listed above, the geographic distribution of
 residents some hundreds of miles from a town or city center exacerbates health issues and
 access to care.

Poverty (and unemployment) is a contributing factor to many of these issues, despite the County's overall relatively favorable ratings with respect to median and per capita income and average employment rates. Community members outside of Flagstaff felt overwhelmingly that a poor economy especially affected their access to care in a variety of ways. Although CCPHSD is not in a position to directly address poverty, the findings of this report could galvanize community action to alleviate the poverty-related issues that impact the County's health.

NEXT STEPS

CCPHSD will engage in a series of meetings with the community groups that contributed their perceptions to this assessment, both to verify that it accurately reflects each community and to develop plans to address the priority issues. This process, called a Community Health Improvement Plan (CHIP), will engage local leaders, solicit their feedback on stated health concerns and ask local stakeholders how they can contribute to the health of the community. Moreover, this Community Health Assessment report is posted on the health district website with a link to encourage all county residents to comment both on the identified problems and on suggested solutions.

APPENDIX – DATA SOURCES AND TECHNICAL INFORMATION

Figure and Text	Data Source(s)
Associated with Figure	5444 5541 6C(3)
All data in report – note on SMALL SAMPLE SIZES	Readers should note that data representing small sample sizes – such as number of births by race/ethnicity, drug-induced deaths, and others – may fluctuate greatly from year to year and are thus unreliable. CCPHSD hopes to do further analyses using larger sample sizes (e.g. by combining several years of data) that will be more reliable.
- Population	Population pyramid data are from www.census.gov – accessed August 27, 2012. US Census includes residents as those living most of a year in a given location. This would include a large proportion of NAU students who attend school in person (as opposed to online). Student population of NAU is Flagstaff campus only and does not include online, Yuma or community campuses. Source: http://nau.edu/about/who-we-are/facts/#Colleges – Accessed 4/3/13.
Population in Coconino County by Race – 2010	www.census.gov – accessed August 27, 2012http://www.census.gov/2010census/popmap/ipmtext.php?fl=04 – ethnicity data accessed 4/12/13 http://factfinder2.census.gov/faces/tableservices/jsf/pages/productvie-w.xhtml?pid=DEC_00_SF1_DP1&prodType=table – ethnicity in 2000, accessed 4/12/13
Language Spoken at Home in Coconino County - 2010	www.census.gov – accessed August 27, 2012
Educational Attainment of Adults in Coconino County – 2010	<u>www.census.gov</u> – accessed August 27, 2012
School Drop-Out Rates in Coconino County, Grades 7-12	www.azed.gov – accessed August 27, 2012
Median and Per Capita Income – 2009	www.census.gov – accessed August 27, 2012
Average Annual Unemployment Rates	www.bls.gov/lau - accessed September 24, 2012
Population to Primary Care Physician Ratios - 2011	County Health Rankings and Roadmaps produced a corrected report on 11/1/2012. The data shown in this current report is the corrected data. Source: 2013 National Benchmarks - http://www.countyhealthrankings.org/sites/default/files/resources/20 13%20National%20Benchmarks.pdf Source: 2013 National Benchmarks -
	http://www.countyhealthrankings.org/sites/default/files/resources/20 13%20National%20Benchmarks.pdf Source for Coconino County:
	http://www.countyhealthrankings.org/app/home#/arizona/2013/coco nino/county/outcomes/overall/snapshot/by-rank

Figure and Text	Data Source(s)		
Associated with Figure	Data Source(s)		
Associated with Figure	Data are 2011-12 but are for the 2013 county rankings. Not		
	, ,		
	comparable to previous years due to methodological change.		
Bullets following Table 1	http://datawarehouse.hrsa.gov/mapgallery.aspx		
Percent of Adults with	www.census.gov – accessed August 27, 2012		
Health Insurance			
Percent of Children with	www.census.gov – accessed August 27, 2012		
Health Insurance			
Deaths among non-	http://www.azdhs.gov/plan/report/ahs/ahs2010/5b.htm, Table 5e-3		
residents			
Age-Adjusted Mortality	www.azdhs.gov – accessed September 24, 2012		
Rates for the Top Ten			
Leading Causes of Death			
- 2010			
Mortality Rates - 2010	www.azdhs.gov – accessed November 2, 2012		
	data.worldbank.org – accessed November 2, 2012		
Age Adjusted Mortality	<u>www.azdhs.gov</u> – accessed September 24, 2012		
Rates for Selected			
Causes of Death - 2010			
Age-Adjusted Mortality	www.azdhs.gov – accessed September 24, 2012		
Rates for Selected			
Causes of Death by			
Race/Ethnicity in Arizona			
- 2010			
Life Expectancy – 2010	<u>www.azdhs.gov</u> – accessed November 2, 2012		
	data.worldbank.org – accessed November 2, 2012		
Mortality Rates for	Alcohol-induced deaths – This category was expanded in 2003. Causes of death attributable to alcohol		
Leading Causes of Death	mortality include mental and behavioral disorders due to		
in Coconino County	alcohol use, degeneration of nervous system due to		
	alcohol use, alcoholic polyneuropathy, alcoholic		
	cardiomyopathy, alcoholic gastritis, alcoholic liver		
	disease, finding of alcohol in blood, accidental poisoning by and exposure to alcohol, intentional self-poisoning by		
	alcohol, poisoning by alcohol, undetermined intent.		
	Cause of death - For the purpose of noantial		
	mortality statistics, every death is attributed to one		
	underlying condition, based on information reported on		
	the death certificate and utilizing the international rules for selecting the underlying cause of death from the		
	reported conditions.		
	Cause-specific mortality - Number of deaths from		
	a specified cause during a calendar year.		
	Classification of causes of death - The cause of death used in this report is the underlying cause		
	classified according to the International Classification of		
	Diseases (ICD). Beginning with the 2000 data year in		
	Arizona (1999 nationally), a new revision of the International		
	Classification of Diseases was implemented. The Tenth Revision (ICD-10) has replaced the Ninth		
	Revision (ICD-9), which was in effect since 1979.		
	Comparability ratios - Comparability ratios are		
	measures of comparison between ICD-9 and ICD-10. Any		
	comparison of causes of mortality in Arizona before and		
	after the implementation of ICD-10 needs to take into		
	after the implementation of ICD-10 needs to take into account the changes in statistical trends that can be		

Figure and Text	Data Source(s)
Associated with Figure	
	attributed to changes in the classification system alone. Comparability ratio of 1.0 indicates that the same
	number of deaths would be assigned to a cause-of-death
	when ICD-9 or ICD-10 was used. Comparability-modified
	number of deaths and mortality rates are shown for the four causes of death for which the discontinuity in trend
	is substantial (influenza and pneumonia, Alzheimer's
	disease, nephritis, or septicemia). The following online
	table provides comparable cause-of-death categories in ICD-9 and ICD-10 and shows comparability ratios for 113
	selected causes of death:
	http://www.azdhs.gov/plan/report/ahs/ahs2007/pdf/com pratios.pdf
	Drug-induced deaths – This category was
	expanded in 2003. Causes of death attributable to drug related mortality include mental and behavioral disorders
	due to psychoactive substance use, accidental poisoning
	by and exposure to drugs, suicide by drugs, homicide by
	drugs and poisoning by drugs, undetermined intent Firearm mortality – Causes of death attributable to
	firearm mortality include accidental discharge of firearms,
	suicide by firearms, homicide by firearms, legal
	intervention involving discharge of firearms, terrorism involving firearms and discharge of firearms,
	undetermined intent.
Obesity in Adults	http://www.countyhealthrankings.org/app/arizona/2011/measure/fac
	tors/11/data/sort-0
	http://apps.nccd.cdc.gov/brfss/display.asp?cat=OB&yr=2011&qkey=82
	61&state=AZSource for statement about age – obesity goes up with
	age until 75http://www.cdc.gov/nchs/data/hus/2011/074.pdf
Rates of natural	Sources: prenatal care Source Table 5B-1.
population increase	http://www.azdhs.gov/plan/report/ahs/ahs2010/5b.htmThe rate of
	natural increase refers to the difference between the number of live
	births and the number of deaths occurring in a year, divided by the
	mid-year population of that year, multiplied by a factor (usually 1,000).
	It is equal to the difference between the crude birth rate and the crude
	death rate. This measure of the population change excludes the effects
	of migration.
Pregnancy Rates Among	http://www.azdhs.gov/plan/report/ahs/ahs2010/toc10.htm
Females ≤ 19 Years Old	<u>www.azdhs.gov</u> – accessed September 24, 2012
	National Vital Statistics Reports, Vol. 60, No. 4, January 11, 2012
Percent of Mothers of	www.azdhs.gov – accessed September 24, 2012
Newborns with Select Characteristics	www.arizonahealthmatters.org – accessed September 24, 2012
Rate of Births to Females	www.azdhs.gov – accessed September 24, 2012
Aged 15 to 19 Years in	accessed september 24, 2012
Coconino County - 2010	
Infant Mortality Rates	http://www.azdhs.gov/plan/report/ahs/ahs2010/5c.htm
	National Vital Statistics Reports, Vol. 60, No. 4, January 11, 2012
Rate of Low Birth Weight	www.azdhs.gov – accessed September 24, 2012
Babies in Coconino	
County by Race/Ethnicity	

Figure and Text	Data Source(s)
Associated with Figure	
-2010	
Rates of Selected	<u>www.azdhs.gov</u> – accessed September 26, 2012
Infectious Diseases in	www.coconino.az.gov/health - accessed September 26, 2012
Coconino County	
Pertussis Rates	<u>www.azdhs.gov</u> – accessed September 26, 2012
	www.cdc.gov – accessed November 2, 2012
Tuberculosis Rates	<u>www.azdhs.gov</u> – accessed September 26, 2012
	www.cdc.gov – accessed November 2, 2012
Chlamydia Rates	www.azdhs.gov – accessed September 26, 2012
Untreated Dental Decay	http://www.azdhs.gov/phs/owch/oral-
in Children (various	health/documents/survey/survey-preschool-data-sheet.pdf
points in time from 2005	
to 2010)	http://www.azdhs.gov/phs/owch/oral-
	health/documents/survey/survey-third-grade.pdf
	<u>www.azdhs.gov</u> – accessed November 2, 2012
	www.healthypeople.gov – accessed November 2, 2012
Figure 29: Percent of	<u>www.census.gov</u> – accessed November 2, 2012
Children in Coconino	datacenter.kidscount.org
County at High Risk of	
Oral Health Problems –	
2011	
Adult tobacco use and	http://apps.nccd.cdc.gov/brfss/display.asp?cat=TU&yr=2011&
alcohol consumption	gkey=8161&state=UB – US
	 http://azdhs.gov/tobaccofreeaz/resources/pdf/dashboards/C
	oconinoCounty-dashboard.pdf - AZ, CC All 2011 data
	Source for drinking
	 http://www.countyhealthrankings.org/app/arizona/2013/mea
	sure/factors/49/data/sort-0 - 2012 data
	<u>sure/Tactors/49/uata/sort-o</u> - 2012 uata
Percent of Teen	www.azcjc.gov – accessed September 26, 2012
Substance Use in	20County%20Profile%20Report.pdfhttp://www.healthypeople.gov/202
Coconino County	0/topicsobjectives2020/nationaldata.aspx?topicId=40
Goodining Godine,	o, topiosos, como o o o o o o o o o o o o o o o o o
	http://www.azcjc.gov/ACJC.Web/sac/AYSReports/2012/2012%20AYS%
	20Coconino%20County%20Profile%20Report.pdf
	The "all students" category published in the AZCJC report shows a
	decrease in substance use over time. Please note that this is probably
	due to the proportion of 8 th graders in the study in the final year. 8 th
	graders make up the majority of students in 2012 and less than a third
	in 2008. Since 8 th graders are less likely to use substances, this makes
	the "all students" number appear to have decreased.
Percent of Obese Adults	apps.nccd.cdc.gov – accessed November 2, 2012
Air Quality Indicators -	www.arizonahealthmatters.org – accessed August 27, 2012
2012	
Select Physical	www.countyhealthrankings.org – accessed August 27, 2012
Environment Indicators -	http://www.countyhealthrankings.org/app/#/arizona/2013/coconino/c
2012	ounty/outcomes/overall/snapshot/by-rank

Figure and Text	Data Source(s)	
Associated with Figure		
	http://www.stateoftheair.org/2012/states/arizona/ - ozone weighted	
	avg.	
Violent Crime Rates -	http://www.countyhealthrankings.org/app/#/arizona/2012/measure/f	
2011	actors/43/data/sort-0	
	When two crimes are committed in one incident, only the most serious	
	crime is counted so there is no double counting offenses – per pg. 9 of	
	report	
	http://www.azdps.gov/About/Reports/docs/Crime In Arizona Report	
	<u>2011.pdf</u>	
Number of Cases of	See above	
Violent Crime in		
Coconino County - 2011		
Number of Cases of	See above	
Violent Crime in Arizona		
- 2011		
Number of Arrests for	See above	
Less Serious Offenses in		
Coconino County - 2011		
Health-related Concerns	Unpublished data from community surveys undertaken Fall 2011	
of Residents in Coconino		
County - 2011		